



STATUS OF THE WATER SECTOR

This review updates the status of U.S. reconstruction projects in Iraq to increase access to clean water and sewerage services and improve water resource management capabilities. SIGIR makes the following observations about progress in the water sector:

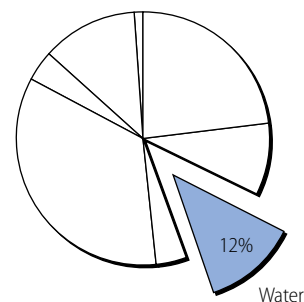
- The sector currently has allocations of \$2.13 billion. (See Figure 2-39.) Almost all projects in this sector have started, and nearly two-thirds are complete. However, only 42% of allocated funds have been expended, with the most expensive projects still to be completed.
- More than \$600 million is yet to be obligated in the water sector.
- The focus in this sector is now on completing projects and ensuring that they are sustained. The Water Sector Sustainment Program (WSSP), new in 2006, provides

\$110 million for sustainment activities.

- Currently, IRMO metrics show that 3.0 million more people have access to clean water, and an additional 5.1 million people have access to sanitation services since the 2003 conflict because of U.S. projects.

During this reporting period, \$202 million was expended, bringing the cumulative total to \$892 million for projects in this sector. Currently, 427 of the 676 total local projects are complete. In addition, 3 nationwide projects have been completed, and 17 nationwide projects are currently ongoing in the water sector. Figure 2-37 shows reconstruction activity in this sector by governorate.

Figure 2-36
**WATER SECTOR AS A
 SHARE OF IRRF FUNDS**
 % of \$18,439 Billion
 Source: IRMS-IRMO Rollup File, 03/31/06





IRRF-funded Activities in the Water Sector

At the end of this reporting period, 63% of projects were complete. Water sector funding is not expected to be fully expended until 2008.²⁹⁵ All USAID projects will be completed by August 2006.²⁹⁶ Figure 2-38 shows the status of projects in the water sector.

During this quarter, \$202 million was disbursed—a sharp drop from last quarter’s \$295 million in expenditures. Although more than 70% of the sector’s funding has been obligated and nearly two-thirds of projects are complete, only 42% has been expended, as of March 29, 2006. Figure 2-39 shows the status of funds in the water sector.

Key Water Projects Completed and Underway

SIGIR reported last quarter on the December 2005 insurgent attack on a convoy at the Erbil Water Treatment Plant project.²⁹⁷ The project will now be delayed beyond the original completion date of April 2006.²⁹⁸ The \$193 million project was 94% complete at the end of March, with final completion expected by June 2006. The plant will provide 144,000 cubic meters (m³) of water per day, which will serve 333,000 residents in Erbil and the surrounding areas.²⁹⁹

The Nassriya Water Treatment Plant is now 70% complete.³⁰⁰ The completion date was originally estimated to be June 2006,³⁰¹ but was recently pushed back to October 2006.³⁰² The setback is attributed to tribal conflicts, a shortage of trained workers, the replacement of

an unqualified subcontractor, logistics delays at the Iraq-Kuwait border, foundation problems, and schedule and safety issues at some of the water tank construction sites.³⁰³ Valued at \$234 million, the completed water treatment plant will provide 240,000 m³ of water per day serving more than 555,000 people.³⁰⁴

122 of the 157 Small Water Rehabilitation Program (PW-90) projects have now been completed; these projects, valued at \$63 million, will benefit 1.65 million Iraqis.³⁰⁵ An additional \$50 million for small water projects (PW-99 and PW-101) has been earmarked for an estimated 100 new projects.³⁰⁶

A \$30.1 million rehabilitation of the Baghdad water main was completed this quarter, which will provide better service reliability to the people of Baghdad.³⁰⁷ During this quarter, GRD-PCO cancelled the Halabja Water Supply project (\$1.9 million) and descoped four projects valued at \$17.2 million.³⁰⁸

Progress continues to be made on the joint Iraqi-USAID initiative for developing a national Strategy for Water and Land Resources for Iraq, the first nationwide water resource master plan completed for the country since 1982. The 14-month Phase 1 of the plan includes data collection and analysis related to water resources, land use, water quality, and crop requirements. The overall goal of the strategy is “to provide a sound and comprehensive basis for the management and development of Iraq’s water and land resources over the next few decades, together with a framework and methodology for ongoing updates to the planning process.”³⁰⁹



Figure 2-37
WATER PROJECTS BY GOVERNORATE
 NUMBER OF PROJECTS
 Source: IRMS-IRMO Rollup File, 03/31/2006

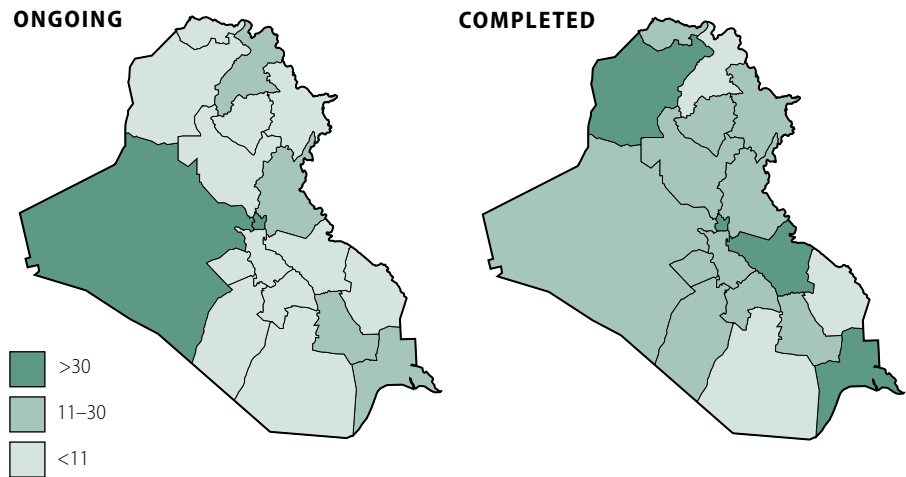


Figure 2-39
STATUS OF WATER FUNDS
 \$ Billions
 Source: DoS Iraq Weekly Status Report, 03/29/06

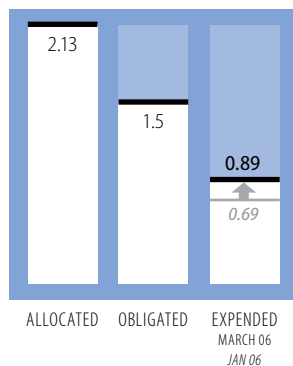
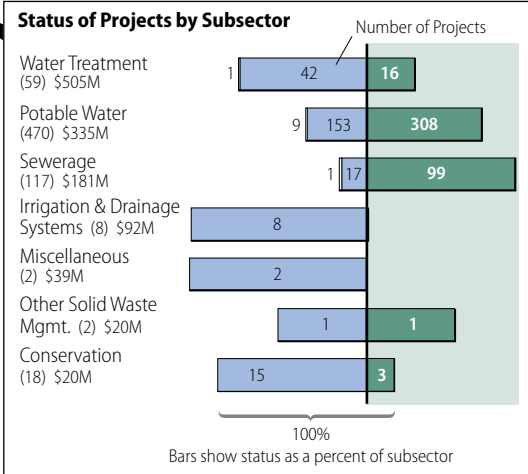
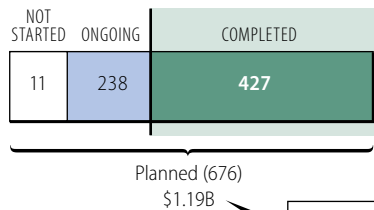


Figure 2-38
STATUS OF WATER PROJECTS
 Number of Projects
 Source: IRMS-IRMO Rollup File, 03/31/06





Water treatment plant at Nassriya

Outputs of IRRF-funded Projects

A 2005 Government Accountability Office (GAO) report concluded that better performance metrics and indicators are needed in the water sector to evaluate U.S. reconstruction efforts. To that end, SIGIR now reports a new output metric, developed by IRMO in cooperation with Iraqi experts, that estimates cubic meters per day of restored or new capacity. With this new metric, additional system capacity for each U.S. project is calculated by taking the difference between the actual system capacity before implementation and the capacity of the system after reconstruction.³¹¹

To date, the United States has repaired or rehabilitated 19 potable water treatment facilities and 9 centralized sewage treatment facilities.³¹³ The outputs of these IRRF-funded projects appear in Table 2-14, which shows the current capacity created by completed U.S. water projects and the anticipated capacity at the end-state, when all planned U.S. projects are completed.

Outcomes of IRRF-funded Projects in the Water Sector

There are a range of estimates of the number of Iraqis who had access to water before the war. Before the first Gulf War, Iraq had an efficient water system that was accessed by 95% of the urban population and 75% of the rural population.³¹⁴ In 2000, the UN and World Bank estimated that roughly 19 million Iraqis had access to water. During the build-up to the 2003 conflict, the continuing sanctions caused a steady decline in access. Last quarter, SIGIR reported that 12.9 million people had access to water before the war.³¹⁵ Other estimates of pre-war coverage range from 9.5 to 14 million people.³¹⁶

It is difficult to measure accurately the total number of Iraqis with access to clean water and sanitation services, but IRMO's new outcome metric to measure the number of people who benefit from U.S. projects has focused the assessment on value added by U.S. projects. This metric for potable water service includes a



Table 2-14

CURRENT U.S. WATER PROJECT OUTPUTS AND ANTICIPATED END-STATE

OUTPUTS (Maximum additional system capacity)	CURRENT STATUS AS OF 03/21/06	ANTICIPATED END-STATE (APRIL 2007)
Potable water	1.1 million cubic meters per day	2.5 million cubic meters per day
Sanitary sewage	1.2 million cubic meters per day	1.2 million cubic meters per day

Sources: IRMO, SIGIR Data Request, received via email on March 24, 2006, p.6.

physical loss factor of 60%, and the metric for sanitation service includes an infiltration factor of 20%. Table 2-15 summarizes data on the outcomes of U.S. water and sanitation projects.

Challenges to Sustainment

SIGIR continues to track the progress of sustainment efforts for U.S. water sector projects. Last quarter, SIGIR noted that a 2005 GAO report found that more than a quarter of reviewed completed projects were not operating at all or were operating at a lower capacity than expected. Since that time, the Water Sector Sustainment Program (WSSP), a new \$110 million sustainment project has been initiated

to address that problem.³¹⁷ WSSP builds on two other major sustainment programs:

- USAID's Water Sector Institutional Strengthening Program (\$25 million)³¹⁸
- GRD-PCO's Ministry of Municipalities and Public Water Resources (MMPW) Management Systems training program (\$14.5 million)³¹⁹

According to GRD-PCO, WSSP will include both operations and maintenance support and assistance and capacity development activities. It will ensure that U.S.-funded assets are operated effectively in the near term, while creating favorable conditions for sustained operation by

Table 2-15

CURRENT OUTCOMES OF U.S. PROJECTS AND ANTICIPATED END-STATE

OUTCOME METRIC (Additional people potentially served at a standard level of service, considering actual system conditions)	CURRENT STATUS 03/21/06	ANTICIPATED END-STATE
Potable water	3.0 million people	8.4 million people
Sanitary sewage	5.1 million people	5.3 million people

Sources: IRMO, SIGIR Data Request, received via email on March 24, 2006, p.6; IRMO, Information Memorandum from Acting IRMO Director to Deputy Chief of Mission, April 19, 2006.



the MMPW, the Ministry of Water Resources (MWR), and Baghdad Amanat (Mayoralty).³²⁰ Capacity-development activities conducted through WSSP will be directly related to sustaining U.S.-funded assets and will include:

- training
- equipment
- technical assistance
- mentoring in the areas of project management
- O&M planning and budgeting
- maintenance management systems
- inventory and warehousing
- vehicle fleet management
- infrastructure protection³²¹

The Capacity Development Initiative (\$11.8 million) is training the technical and managerial staff of the MMPW and MWR in budget-

ing, water quality, project management, utility master planning, and other management skills. This program is scheduled to be finished at the end of this quarter.³²²

Project Partnership Agreements (PPAs) have also been used in the water sector to develop Iraqi capacity. PPAs are agreements between GRD-PCO and the responsible Iraqi organization to offer Iraqis the opportunity to award, administer, and oversee U.S. funded projects. PPAs will be used for a small number of water projects—including the construction of the Baladrooz Water Treatment Plant—to further build capacity in the MMPW and the MWR.³²⁴

CONTRACTS UPDATE

During this quarter, \$944 million of the IRRF was obligated, increasing the cumulative total to \$16.3 billion.³²⁵ As required under Public Law (P.L.) 108-106, as amended, SIGIR lists IRRF contracting actions through the SIGIR Iraq Reconstruction Information System (SIRIS). For a complete list of all IRRF-funded contracting actions received by SIGIR, see Appendix G on the Report CD.

No single U.S. government information system currently captures comprehensive project, contract, and financial information about Iraq reconstruction. To meet its statutory mandate, SIGIR designed and built SIRIS as a repository for all project, contract, and financial data on Iraq reconstruction. SIRIS serves as a warehouse of Iraq reconstruction data from all of the organizations authorized to obligate IRRF monies. The executing agencies feed contracting actions into SIRIS (subject to later validation) from facsimile copies of the source contract documents.

Since the January 2006 Report, SIGIR recorded 407 new contracting actions from Joint Contracting Command-Iraq (JCC-I/A), which obligated more than \$89 million. These contracting actions include modifications to existing contracts, as well as new task orders issued and contracts awarded. Of the \$89 million, more than \$5 million were IRRF obligations issued in 61 new contracting actions. Most of the contracting actions were funded

by the ISFF—179 actions obligating more than \$47 million.

To date, SIGIR has received 4,044 contracting actions into SIRIS, obligating \$12.8 billion. Of those actions, 1,677 have been funded by IRRF for obligations of more than \$5.3 billion.

Currently, no other U.S. information system tracks the \$16.3 billion in IRRF obligations. GRD-PCO plans to develop the capability as part of its newly integrated Iraq Reconstruction Management System (IRMS). See Section 3 for the audit, “Management of Iraq Relief and Reconstruction Fund Programs: The Evolution of the Iraq Reconstruction Management System.”

Competition and Contracting Action Analysis

Analysis of SIRIS contract data uses two parameters: the total number of contracting actions and the total dollar value of contracting actions.

During reconstruction in Iraq, several acquisition strategies were implemented based on project requirements and constraints. For the first two quarters of FY 2006, contracting actions were awarded using primarily full and open competition. Table 2-16 lists the total value of contracting actions by competition type.

For FY 2003, several projects were generally broader in scope and were therefore funded by

contracts with flexible terms. Indefinite delivery, indefinite quantity (IDIQ) contracts have these flexible terms: they are awarded based on the total ceiling value that a contractor may receive. The contractor receives payment only for work on task orders issued under the overall IDIQ contract.

Beginning in FY 2005, the method of solicitation shifted from issuing task orders under large “umbrella” contracts to competi-

tive, supply-and-build direct contracts. Table 2-17 delineates, by fiscal year, the increased gap between the total number of task orders and contracts issued. Table 2-18 breaks out contracting actions by contracting office. For the current fiscal year, contracting actions have been primarily managed by the Joint Contracting Command-Iraq/Afghanistan (JCC-I/A).

TOTAL VALUE OF CONTRACTING ACTIONS BY COMPETITION TYPE, AS OF MARCH 31, 2006 (IN MILLIONS)

COMPETITION TYPE	FY 2003	FY 2004	FY 2005	FY 2006 QUARTER 1	FY 2006 QUARTER 2	TOTAL
Full & Open	\$4,336.85	\$22,964.55	\$1,064.37	\$119.86	\$41.45	\$28,527.07
Sole Source	8,578.54	1,302.64	0.00	0.00	0.00	\$9,881.18
Not Available	69.32	1,468.18	207.74	28.04	1.51	\$1,774.79
Limited Competition	480.01	729.25	39.40	0.00	0.00	\$1,248.65
Set-aside Small Business	29.57	172.60	5.35	0.00	0.00	\$207.52
Small Disadvantaged	112.70	19.52	0.00	0.00	0.00	\$132.22
<i>Subtotal</i>	<i>13,606.99</i>	<i>26,656.73</i>	<i>1,316.85</i>	<i>147.90</i>	<i>42.96</i>	<i>\$41,771.44</i>
Dollars out of Date Range	0.00	0.00	0.00	0.00	0.00	\$141.85
Total	\$13,606.99	\$26,656.73	1,316.85	\$147.90	\$42.96	\$41,913.29

Note: The values above represent the potential “ceiling value” of contracts.

Table 2-16

ANALYSIS OF CONTRACTING ACTIONS BY COMPETITION TYPE, AS OF MARCH 31, 2006

CONTRACTING ACTION	FY 2003		FY 2004		FY 2005		FY 2006	
	QUANTITY	% OF TOTAL	QUANTITY	% OF TOTAL	QUANTITY	% OF TOTAL	QUANTITY	% OF TOTAL
Contracts	32	53.33%	189	34.18%	1428	82.45%	371	81.72%
Task Orders	28	46.67%	364	65.82%	304	17.55%	83	18.28%

Department of State, Iraq Weekly Status, January 4, 2006, and March 29, 2006

Table 2-17

ANALYSIS OF CONTRACTING ACTIONS BY CONTRACTING OFFICE, AS OF MARCH 31, 2006

CONTRACTING OFFICE	NUMBER OF CONTRACTING ACTIONS	% OF TOTAL CONTRACTING ACTIONS	TOTAL VALUE (IN MILLIONS)	% OF TOTAL CONTRACT VALUE
U.S. Army Corps of Engineers	220	5.44%	\$13,572.16	32.38%
Defense Contract Management Agency	888	21.96%	\$7,001.84	16.71%
Coalition Provision Authority	331	8.18%	\$5,555.47	13.25%
U.S. Department of State	12	0.30%	\$5,332.80	12.72%
U.S. Agency for International Development	56	1.38%	\$4,000.64	9.55%
NAVFAC	4	0.10%	\$1,701.34	4.06%
Projects and Contracting Office	1199	29.65%	\$1,031.35	2.46%
AMC	13	0.32%	\$666.59	1.59%
Joint Contracting Command Iraq-Afghanistan	1155	28.56%	\$558.00	1.33%
DCCW	44	1.09%	\$404.82	0.97%
HQ JMC	1	0.02%	\$303.53	0.72%
Pentagon Renovation Office	4	0.10%	\$297.58	0.71%
Ordinance and Engineering	5	0.12%	\$290.80	0.69%
NRCC General Support Division	10	0.25%	\$251.04	0.60%
Defense Contracting Command	2	0.05%	\$191.11	0.46%
U.S. Army Tank-automotive Armaments Command	24	0.59%	\$178.41	0.43%
AFCEE	10	0.25%	\$172.75	0.41%
Acquisition and Assistance Office	1	0.02%	\$119.07	0.28%
Communications Electronics Command	1	0.02%	\$75.00	0.18%
SPAWAR Systems Center	6	0.15%	\$60.87	0.15%
Army Contracting Agency	7	0.17%	\$46.04	0.11%
DITCO	16	0.40%	\$42.11	0.10%
Defense Information Systems Agency	11	0.27%	\$30.13	0.07%
Other	24	0.59%	\$29.84	0.07%
Total	4044	100.00%	\$41,913.29	100.00%

TABLE 2-18

